

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 10-045913

(43)Date of publication of application : 17.02.1998

(51)Int.CI.

C08G 75/23  
H01M 8/02

(21)Application number : 09-097157

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(22)Date of filing : 15.04.1997

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(30)Priority

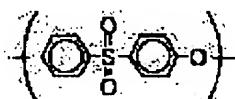
Priority number : 08 97151 Priority date : 18.04.1996 Priority country : JP

(54) HIGH-MOLECULAR ELECTROLYTE, ITS PRODUCTION AND FUEL CELL MADE BY USING THE SAME

(57)Abstract:

PROBLEM TO BE SOLVED: To produce a low-cost high-molecular electrolyte which can be easily molded and processed because of solubility in an organic solvent and thermoplasticity, and is suitable for a high-performance fuel cell because of high water resistance and ease of control of its structure, and to provide a high-performance fuel cell made therefrom.

SOLUTION: This electrolyte comprises a sulfonated polyethersulfone having an equivalent weight of ion exchange groups of 800-5,000g/mol and obtained by sulfonating a polyethersulfone consisting of repeating structural units represented by the formula. The polyethersulfone is sulfonated by reacting it with a sulfonating agent in concentrated sulfuric acid, giving the sulfonated polyethersulfone. The fuel cell is made by using the electrolyte.



## LEGAL STATUS

[Date of request for examination] 30.09.2003

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application]

[converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of  
rejection]

[Date of requesting appeal against examiner's  
decision of rejection]

[Date of extinction of right]

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